

DFW Course Enrollment by the Fall 2020 FYS Cohort

The DFW subgroup of the Retention Steering Committee partnered with Institutional Research to attempt to answer a few questions about the impact of enrollment in multiple “high DFW” courses in the first term of enrollment:

- Do students who *enroll in multiple high DFW courses in their first semester* (regardless of grades earned) persist to the second year at the same rate as students who enroll in fewer of these courses?
- Do students who enroll in multiple high DFW courses in their first semester *change their major more frequently* than students who enroll in fewer of these courses?

Here is what the data look like for the 2020 Cohort as a whole, and for a number of different populations of students:

OVERALL DATA: 1814

Number of High DFW Courses TAKEN Fall 2020	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	363	2.99	273 (75.2%)	YES: 140 (38.6%) NO: 223 (61.4%)	121 (86.4%) 152 (68.2%)
1	714	2.61	499 (69.9%)	YES: 276 (38.6%) NO: 438 (61.3%)	240 (86.9%) 259 (59.1%)
2	536	2.42	364 (67.9%)	YES: 209 (39.0%) NO: 327 (61.0%)	177 (84.7%) 187 (57.1%)
3	171	2.34	120 (70.2%)	YES: 70 (40.9%) NO: 101 (59.1%)	57 (81.4%) 63 (62.4%)
4	30	2.39	21 (70.0%)	YES: 16 (53.3%) NO: 14 (46.7%)	12 (75.0%) 9 (64.3%)
Totals:	1814	2.60	1277 (70.4%)	YES: 711 (39.2%) NO: 1103 (60.8%)	607 (85.4%) 670 (60.7%)

Females: 1033

Number of High DFW Courses Taken Fall 2020	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	204	3.14	158 (77.5%)	YES: 81 (39.7%) NO: 123 (60.3%)	71 (87.7%) 87 (70.7%)
1	404	2.78	285 (70.5%)	YES: 159 (39.4%) NO: 245 (60.6%)	141 (88.7%) 144 (58.8%)
2	303	2.66	211 (69.6%)	YES: 124 (40.9%) NO: 179 (59.1%)	105 (84.7%) 106 (59.2%)
3	102	2.44	68 (66.7%)	YES: 44 (43.1%) NO: 58 (56.9%)	36 (81.8%) 32 (55.2%)
4	20	2.64	15 (75.0%)	YES: 12 (60.0%) NO: 8 (40.0%)	11 (91.7%) 4 (50.0%)
Totals:	1033	2.78	737 (71.3%)	YES: 420 (40.7%) NO: 613 (59.3%)	364 (86.7%) 373 (60.8%)

Males: 781

Number of High DFW Courses Taken Fall 2020	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	159	2.80	115 (72.3%)	YES: 59 (37.1%) NO: 100 (62.9%)	50 (84.7%) 65 (65.0%)
1	310	2.38	214 (69.0%)	YES: 117 (37.7%) NO: 193 (62.3%)	99 (84.6%) 115 (59.6%)
2	233	2.12	153 (65.7%)	YES: 85 (36.5%) NO: 148 (63.5%)	72 (84.7%) 81 (54.7%)
3	69	2.18	52 (75.4%)	YES: 26 (37.7%) NO: 43 (62.3%)	21 (80.8%) 31 (72.1%)
4	10	1.90	6 (60.0%)	YES: 4 (40.0%) NO: 6 (60.0%)	1 (25.0%) 5 (75.0%)
Totals:	781	2.37	540 (69.1%)	YES: 291 (37.3%) NO: 490 (62.7%)	243 (83.5%) 297 (60.6%)

URM Students: 319

Number of High DFW Courses TAKEN Fall 2020	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	44	2.06	24 (54.5%)	YES: 6 (13.6%)	6 (100%)
				NO: 38 (86.4%)	18 (47.3%)
1	130	2.08	78 (60.0%)	YES: 52 (40.0%)	44 (84.6%)
				NO: 78 (60.0%)	34 (43.6%)
2	108	1.79	60 (55.5%)	YES: 44 (40.7%)	35 (79.5%)
				NO: 64 (59.3%)	25 (39.0%)
3	28	1.52	11 (39.3%)	YES: 9 (32.1%)	7 (77.7%)
				NO: 19 (67.9%)	4 (21.0%)
4	9	2.50	7 (77.7%)	YES: 4 (44.4%)	2 (50%)
				NO: 5 (55.6%)	5 (100%)
Totals:	319	1.94	180 (56.4%)	YES: 115 (36.1%)	94 (81.7%)
				NO: 204 (63.9%)	86 (42.2%)

White Students: 1495

Number of High DFW Courses TAKEN Fall 2020	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	319	3.12	249 (78.1%)	YES: 134 (42.0%)	115 (85.8%)
				NO: 185 (58.0%)	134 (72.4%)
1	584	2.72	421 (72.1%)	YES: 224 (38.4%)	196 (87.5%)
				NO: 360 (61.6%)	225 (62.5%)
2	428	2.58	304 (71.0%)	YES: 165 (38.5%)	142 (86.0%)
				NO: 263 (61.5%)	162 (61.6%)
3	143	2.50	108 (75.5%)	YES: 61 (42.7%)	50 (82.0%)
				NO: 82 (57.3%)	58 (70.7%)
4	21	2.35	14 (66.7%)	YES: 12 (57.1%)	10 (83.3%)
				NO: 9 (42.9%)	4 (44.4%)
Totals:	1495	2.74	1096 (73.3%)	YES: 596 (39.9%)	513 (86.1%)
				NO: 899 (60.1%)	583 (64.8%)

First Gen Students: 809

Number of High DFW Courses Taken Fall 2020	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	131	2.60	79 (60.3%)	YES: 47 (35.9%)	38 (80.9%)
				NO: 84 (64.1%)	41 (48.8%)
1	334	2.44	214 (64.1%)	YES: 129 (38.6%)	109 (84.5%)
				NO: 205 (61.4%)	105 (51.2%)
2	246	2.21	153 (62.2%)	YES: 90 (36.6%)	76 (84.4%)
				NO: 156 (63.4%)	77 (49.4%)
3	82	2.07	52 (63.4%)	YES: 32 (39.0%)	24 (75.0%)
				NO: 50 (61.0%)	28 (56.0%)
4	16	2.35	12 (75.0%)	YES: 10 (83%)	7 (70.0%)
				NO: 6 (17.0%)	5 (83.3%)
Totals:	809	2.36	510 (63.0%)	YES: 308 (38.1%)	254 (82.5%)
				NO: 501 (61.9%)	256 (51.1%)

Some key observations from these analyses:

There is a relationship between Cumulative GPA and the number of high DFW courses taken in the first semester that is not surprising.

- The more of these courses taken in the first semester, the lower the CUM GPA.
- The CUM GPAs of male students and URM students are impacted to a larger degree than other populations.

There is a general incremental decline in OVERALL persistence rates to the second year that are tied to the number of high DFW courses taken in the first semester.

- The more of these courses taken in the first semester, the lower the persistence rate.
- Again – the largest declines in overall persistence rates are seen with male students and URM students.

When the overall data are examined, we can see that the percentage of students who change their major increases as a function of the number of high DFW courses taken, but not to a significant degree.

- Female students show the greatest increases in major changing as a function of the number of DFW courses taken, while males show the smallest increases in major changing.

The most fascinating finding, however, can be seen when persistence to the second year is examined as a function of whether students changed their major at some point in their first year.

- Regardless of the type of student or the number of DFW courses taken in the first semester, the persistence rates of students who CHANGE THEIR MAJOR at some point during their first year is profoundly higher than those who do not.
- Examining the cohort as a whole: the persistence rate to the second year for MAJOR CHANGERS was 85.4% compared to just 60.7% for students who did NOT CHANGE their major. This same persistence gap can be seen regardless of student type:

	Persistence Rate of Major Changers	Persistence Rate of Students who did NOT change their major	Persistence Gap between Major Changers and Non-Major Changers
Overall Cohort	85.4%	60.7%	24.7%
URM Students	81.7%	42.2%	39.5%
First Generation Students	82.5%	51.1%	31.4%
Female Students	86.7%	60.8%	25.9%
Male Students	83.5%	60.6%	22.9%
White Students	86.1%	64.8%	21.3%

While the difference in overall persistence between URM students (56.4%) and WHITE students (73.3%) was 16.9% from the first to the second year, the gap was significantly LESS between URM and White students who changed their major in the first year:

- The persistence gap was 4.4% for major changers: 81.7% (URM) vs 86.1% (White)
- The persistence gap for students who did NOT change their major was 22.6%: 42.2% (URM) vs 64.8% (White)

Here is a different way of looking at the same data – an examination of CUM GPA, Persistence, and Persistence of Major Changers as a function of the number of actual grades of D, F, or W earned by the student during their first year:

No. of DFW Grades Earned in the First Year	N	CUM GPA	Overall Persistence to Fall 2021	Changed Major in the first year?	Enrolled Fall 2021
0	1050	3.41	882 (84.0%)	YES: 451 (43.0%)	408 (90.5%)
				NO: 599 (57.0%)	474 (79.1%)
1	240	2.60	185 (77.0%)	YES: 110 (45.8%)	96 (87.3%)
				NO: 130 (54.2%)	89 (68.5%)
2	116	1.86	65 (56.0%)	YES: 43 (37.1%)	37 (86.0%)
				NO: 73 (62.9%)	28 (38.4%)
3	117	1.37	65 (55.6%)	YES: 36 (30.8%)	23 (63.9%)
				NO: 81 (69.2%)	42 (51.9%)
4	134	0.64	45 (33.6%)	YES: 42 (31.3%)	27 (64.3%)
				NO: 92 (68.7%)	18 (19.6%)
5	130	0.32	31 (23.8%)	YES: 25 (19.2%)	16 (84.2%)
				NO: 105 (80.8%)	15 (14.3%)
6	21	0.49	4 (19.0%)	YES: 4 (19.0%)	0 (0.0%)
				NO: 17 (80.9%)	4 (23.5%)
7	6	0.07	0 (0.0%)	YES: 0 (0.0%)	0 (0.0%)
				NO: 6 (100%)	0 (0.0%)
Totals:	1814	2.60	1277 (70.4%)	YES: 711 (39.2%) NO: 1103 (60.8%)	607 (85.4%) 670 (60.7%)

Examining the data in this way, a number of things are evident:

- Here is where we can see a direct relationship between overall persistence rates and the number of DFW grades earned.
- The percentage of students who changed their major decreased as a function of the number of DFW grades earned.
 - Students who earned 1 or fewer grades of D, F, or W had the highest major change rates and persistence rates.
 - The larger the number of D, F, and W, earned, the lower the percentage of students who changed their major...and the lower the persistence rate. These are the students who stuck it out in their major for a second semester...and who earned a second semester of poor grades.

Here is a look at the performance of students in the 2020 Cohort who enrolled in courses we have identified as **High DFW** (average DFW Rate of 20% or higher over the past six years):

High DFW Course	Number of FY Students Enrolled Fall 2020	Number of Students who EARNED a D/F/W	Persistence Rate of Students who Took the Course	Persistence Rate of Students Earning DFW Grade in the Course	Number of Students Enrolled in the Course who Changed Their Major in the First Year	Persistence Rate of Students who Changed Their Major
BIOL 101	87	31 (35.6%)	75.9%	58.1%	50 (57.5%)	88.0%
BIOL 110	79	26 (32.9%)	62.0%	38.5%	48 (60.8%)	68.8%
CHEM 105	240	66 (27.5%)	77.9%	54.5%	105 (43.8%)	85.7%
CHEM 106	4	0	100%	NA	1 (25.0%)	100.0%
DSN 101	90	37 (41.1%)	70.0%	43.2%	26 (28.9%)	88.5%
HIST 101	103	41 (39.8%)	69.9%	34.1%	33 (32.0%)	87.9%
HIST 102	108	37 (34.3%)	66.7%	40.5%	37 (34.3%)	83.8%
HIST 292	38	19 (50.0%)	81.6%	73.7%	20 (52.6%)	100.0%
MATH 107	322	63 (19.6%)	75.8%	52.4%	145 (45.0%)	84.8%
MATH 109	9	3 (33.3%)	44.4%	33.3%	1 (11.1%)	100.0%
MATH 111	8	2 (25.0%)	37.5%	0.0%	1 (12.5%)	0.0%
MATH 090	319	97 (30.4%)	57.4%	24.7%	100 (31.3%)	82.0%
MATH 095	315	65 (20.6%)	67.3%	41.5%	131 (41.6%)	80.9%
MSTU 102	69	13 (18.8%)	87.0%	61.5%	24 (34.8%)	87.5%
MSTU 106	20	6 (30.0%)	65.0%	40.0%	9 (45.0%)	77.8%
PHIL 100	81	19 (23.5%)	70.4%	57.9%	27 (33.3%)	88.9%
POLS 101	72	28 (38.9%)	65.3%	42.9%	28 (38.9%)	85.7%
PSYC 110	455	128 (28.1%)	66.8%	36.7%	180 (39.6%)	84.4%

Here is a look at the GPA, persistence rates, and persistence of major changers for a number of STEM Majors:

Major	Number of Students	GPA	Overall Persistence to Fall 2021	Changed Major?	Enrolled Fall 2021
BIOCHEM	27	2.30	19 (70.4%)	YES: 15	12 (80.0%)
				NO: 12	7 (58.3%)
BIOL	52	2.61	36 (69.2%)	YES: 18	16 (88.9%)
				NO: 34	20 (58.9%)
CHEM	10	3.25	7 (70.0%)	YES: 10	7 (70.0%)
				NO: 0	
CIS	23	2.76	16 (69.6%)	YES: 5	3 (60.0%)
				NO: 18	13 (72.2%)
FOR	55	2.76	49 (89.1%)	YES: 16	14 (87.5%)
				NO: 39	35 (89.7%)
FWR	48	2.58	41 (85.4%)	YES: 8	6 (75.0%)
				NO: 40	35 (87.5%)
HS	52	2.68	41 (78.8%)	YES: 16	13 (81.3%)
				NO: 36	28 (77.8%)
MATH	13	3.54	12 (92.3%)	YES: 3	2 (66.7%)
				NO: 10	10 (100%)
Pre PROF	51	2.43	36 (70.6%)	YES: 44	35 (79.5%)
(not NUR)				NO: 7	1 (14.3%)
WLDL	105	2.77	83 (79.0%)	YES: 28	26 (92.9%)
				NO: 77	57 (74.0%)
UND	221	2.37	148 (67.0%)	YES: 148 (67.0%)	135 (91.2%)
				NO: 73 (33.0%)	13 (17.8%)

A few things stand out here:

- Classic STEM majors (BIOCHEM, BIOL, CHEM, Pre-PROF SCI) show the same patterns of higher persistence rates among major changers
- A number of majors in CNR (FOR, FWR) “flip the script”, and show lower persistence rates with major changers, but the major with the largest enrollment (WLDL) shows a much higher persistence rate among major changers.

Undecided majors who declare their major in the first year show the **HIGHEST** persistence rates of any single type of student across the board, at 91.2%.

OVERALL TAKEAWAYS FROM THESE ANALYSES

It is critical that we intentionally and proactively help our students identify and learn about the majors that are the best fit with their academic interests and abilities, and that this discovery take place both prior to and during the first year.

- Students who are in a major that allows them to experience academic and personal success will persist at MUCH higher rates than those who struggle for multiple terms in a major where the experience nothing but frustration, while internalizing a message that they are “not cut out for college”.
- What steps should we take as a university to help prospective and admitted students begin to do this work prior to their first semester of enrollment?
- How can we be more intentional in discussing the process of evaluating a major with students who struggle in their first semester, or who do well academically in their first semester but realize that they are not going to enjoy their current plan of study?

This understanding of our students should inform the university-wide model of EARLY CAREER EXPERIENCES that we are developing.

- The outcomes we create for the first year must include the expectation that students do the work that is necessary to understand themselves, and how their interests and abilities map to particular majors at the university...with a broader goal of ensuring that every student “finds a major that fits”.
- We have to establish a culture that it is OK for students to change their major, provided they are doing it for the right reasons!
- We also have to adopt a campus-wide, collaborative mindset that this is “all about the student”, and not about retaining them in a particular major or degree-granting college. *What truly matters is that they persist at UWSP...and that they are happy in their major and fully engaged in the life of their degree-granting college.*

This understanding of our students should also inform the plan we create as an institution to meet the Purpose First System Initiative in collaboration with Complete College America.

- Our data for URM and First-Generation students is in direct alignment with the key messages of this initiative, so our focus needs to be on creating a model of major exploration and career discovery that also fosters an understanding of the relationship between a major and career, because it is clear that the persistence of these populations is *closely* tied to being in the right program of study.
- This model should be rooted in an understanding of the reasons why our underserved populations are attending college, that can be obtained from the Entering Student Survey.

Starting college as an undecided major is a GOOD THING – it is not something that causes students to leave the university!

- As noted above, when undecided majors make an informed major decision in their first year, they persist at higher rates than ANY OTHER STUDENTS...because they did the personal and academic exploration that the majority of their peers DID NOT DO in their first year, having declared a major (often for the wrong reasons).
- The critical factor is *how long we allow undecided majors to REMAIN undecided* – the decision of a major needs to happen by the end of the first year, so it would be valuable to closely examine how we currently work with students who remain undeclared into their second semester...to get as many of them as possible in the right major before the end of the spring semester.

The bottom line: what are we doing as an institution to ensure that all of our students are in a major that is the BEST fit with their academic interests and abilities as early as possible??

- We should not be waiting for our students to experience repeated failure over several terms in their first year or come to the realization that they are not in a major that fits who they are as a person in their second or third year. Rather, we should have the programs and process in place to help them with these decisions as early as possible in their academic careers.
- This fits with our Provost’s idea that we need to become STUDENT READY. 😊

Here is a breakdown of the Fall 2020 enrollment by DECLARED MAJOR, excluding AA/AS/AAS degrees, NUR, and UND majors:

Major	Enrollment at Matriculation	Changed Major at some point	Changed to a major WITHIN the same College
ACCT	17	6 (35.3%)	6 (100%)
ART	17	4 (23.5%)	1 (25.0%)
ARTM	1	1 (100%)	0
BECON	4	2 (50.0%)	1 (50.0%)
BIOCHEM	27	15 (55.6%)	9 (60.0%)
BIOL	52	18 (34.6%)	8 (44.4%)
BUS	34	9 (26.5%)	8 (88.9%)
CHEM/CHEM-T	10	10 (100%)	8 (80.0%)
CHM-ENG	17	9 (52.9%)	0
CIS	23	5 (21.7%)	1 (12.5%)
CLS	10	3 (30.0%)	1 (33.3%)
COMM	26	7 (26.9%)	5 (71.4%)
CSD	32	20 (62.5%)	14 (70.0%)
DATA-AN	7	2 (28.6%)	1 (50.0%)
DIETET	15	9 (60.0%)	4 (44.4%)
DNCE	8	2 (25.0%)	1 (50.0%)
ECE	23	7 (30.4%)	1 (14.3%)
ELEM-ED	78	31 (39.7%)	20 (64.5%)
ENGL/ENGL-T	19	4 (21.0%)	3 (75.0%)
FCS/FCS-T	14	6 (42.9%)	6 (100%)
FIN	18	4 (22.2%)	4 (100%)
FOR	55	16 (29.1%)	8 (50.0%)
FREN-T	1	1 (100%)	1 (100%)
FWR	48	8 (16.7%)	3 (37.5%)
GD	15	3 (20.0%)	2 (66.7%)
GEOSP	1	1 (100%)	0
GERM/GERM-T	2	0	0
HIST/HIS-SSE	30	11 (36.7%)	6 (54.5%)
HLTH-PR	8	0	0
HS	52	16 (30.8%)	7 (43.8%)
HWM	1	1 (100%)	1 (100%)
IA	40	10 (25.0%)	3 (30.0%)
INTL	2	0	
MATH/MATH-T	13	3 (23.1%)	0
MGT	29	3 (10.3%)	1 (33.3%)
MKTG	25	6 (24.0%)	4 (66.7%)
MUED	31	8 (25.8%)	2 (25.0%)
MUS	12	5 (41.7%)	5 (100%)
NTSC	8	3 (37.5%)	0
PHY-ED	15	3 (20.0%)	2 (66.7%)
PHYS	10	4 (40.0%)	2 (50.0%)
POLI	8	2 (25.0%)	1 (50.0%)
Pre-Prof Science	51	44 (86.3%)	30 (68.2%)
PRE-LAW	5	4 (80.0%)	3 (75.0%)
PSEN	4	4 (100%)	0
PSYC	66	21 (31.8%)	7 (33.3%)
RES-MGT	100	72 (72.0%)	63 (87.5%)
SOC	15	6 (40.0%)	3 (50.0%)
SOIL	8	2 (25.0%)	1 (50.0%)
SPAN/SPAN-T	4	3 (75.0%)	2 (66.7%)
SPC-ED	16	12 (75.0%)	12 (100%)
SUSFD	2	1 (50.0%)	0
SW	35	22 (62.9%)	20 (90.1%)
THEA	32	8 (25.0%)	5 (62.5%)
WD	1	0	0
WLDL	105	28 (26.7%)	18 (64.3%)
TOTALS	1304	505 (38.7%)	314 (62.2%)

As you can see, nearly 2 out of 3 students who change their major wind up in a program of study in the same Degree Granting College. A cursory review of the students who changed to a major in a different College indicates that the *majority of these students selected a program of study that we might consider being in the same "family" or meta-major group.*

In other words, the vast majority of our students are not making random changes – they appear to be fairly thoughtful and intentional.